

Applicants understand the Examiner's markings in this regard to mean that JP 4-259809 has been considered by the Examiner and made of record and that the second occurrence of JP 4-259809 on the PTO 1449A form was stricken because it was a duplicative entry. In this regard, it appears that the line drawn through the first occurrence of JP 4-259809 was an oversight. Applicants request confirmation that JP 4-259809 has been considered and made of record and would appreciate the Examiner's assistance in taking appropriate steps to ensure that JP 4-259809 appears as a cited reference on any patent issuing from the present application. The undersigned apologizes for any inconvenience that the duplicative listing of JP 4-259809 may have caused.

The Office Action includes a rejection of claims 1, 4 and 25-28 under 35 U.S.C. § 102(b) as allegedly being anticipated by the Shimoni patent (U.S. Patent No. 4,580,054). The Office alleges that the Abstract and column 7, line 8 through column 8, line 48 of the Shimoni patent disclose the features recited in these claims. This rejection is respectfully traversed.

Independent claim 4 recites an image input system comprising a measuring unit for measuring an object and for generating shape data of the object, the measuring unit being positionable in different positions relative to an axis of rotation. The system also comprises a calculating unit for calculating coordinate transformation information based upon a plurality of shape data obtained from different points of view of the object obtained by the measuring unit positioned at multiple positions, said coordinate transformation information including a position of the axis of rotation. The system further comprises a

processing unit for synthesizing at least some of the plurality of shape data in accordance with the calculated coordinate transformation information.

In contrast, the Shimoni patent does not disclose a processing unit for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information, as recited in claim 4. Applicants see no disclosure in the Shimoni patent, including the Abstract and column 7, line 8 through column 8, line 48 therein, of synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information. Rather, the Shimoni patent discloses an apparatus for obtaining a set of two-dimensional views of a body and for successively displaying the set of views on a display screen, which shows the body as rotating about an axis (see, e.g., Abstract of Shimoni). The Shimoni patent also discloses determining the three-dimensional coordinates of a point of interest "A" within the body (see, e.g., column 2, lines 34-37; column 3, line 64 through column 4, line 11; column 8, lines 33-48; and Figures 2a and 2b therein). However, these disclosures do not satisfy the recitation of a processing unit for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information, as recited in claim 4.

Moreover, the Office alleges that the Shimoni patent discloses determining coordinate information based upon different locations of an object, but it is respectfully submitted that the Shimoni patent does not disclose a calculating unit for calculating coordinate transformation information based upon a plurality of shape data. To the extent that the Shimoni patent discloses calculating three-dimensional coordinates of a point of

interest "A" within a body from a series of positions of the point of interest "A" from different two-dimensional angular views, the positions of the point of interest "A" in the two-dimensional angular views are not properly considered shape data as recited in claim 4.

For at least the above-noted reasons, Applicants respectfully submit that claim 4 is not anticipated by the Shimoni patent. Withdrawal of the rejection is respectfully requested.

Independent claim 25 recites an image input system, comprising measuring means for measuring an object and for generating shape data of the object, and calculating means for calculating coordinate transformation information based upon a plurality of shape data obtained from different points of view of the object obtained by the measuring means. The system further comprises synthesizing means for synthesizing at least some of the plurality of shape data in accordance with the calculated coordinate transformation information. Accordingly, Applicants respectfully submit that claim 25 is distinguishable over the Shimoni patent at least for reasons similar to those set forth above with regard to claim 4. Withdrawal of the rejection is respectfully requested for at least these reasons. Claim 26 depends from claim 25, and withdrawal of the rejection against claim 26 is respectfully requested at least for reasons set forth with regard to claim 25.

Independent claim 27 recites an image input system, comprising a plurality of measuring units for measuring an object and for generating shape data of the object, the measuring units being disposed at a plurality of positions relative to an axis associated with

a position of the object. The system also comprises a calculating unit for calculating coordinate transformation information based upon a plurality of shape data obtained from different points of view of the object obtained by the measuring units disposed at the plurality of positions, said coordinate transformation information including a position of the axis. The system further comprises a processing unit for synthesizing at least some of the plurality of shape data in accordance with the calculated coordinate transformation information. Accordingly, Applicants respectfully submit that claim 27 is distinguishable over the Shimoni patent at least for reasons similar to those set forth above with regard to claim 4.

In addition, claim 27 recites a plurality of measuring units, whereas the Shimoni et al. patent discloses a single imaging means 3. Accordingly, claim 27 is distinguishable over the Shimoni patent for at least this additional reason. Withdrawal of the rejection is respectfully requested for at least these reasons.

Independent claim 1 recites an image input system, comprising, *inter alia*, a calculating unit for calculating coordinate transformation information based upon a plurality of shape data obtained from a plurality of surface regions of the object, and a processing unit for synthesizing at least some of the plurality of shape data in accordance with the calculated coordinate transformation information. Accordingly, Applicants respectfully submit that claim 1 is distinguishable over the Shimoni patent at least for reasons similar to those set forth above with regard to claim 4.

In addition, claim 1 recites, *inter alia*, that the coordinate transformation information is calculated based upon a plurality of shape data obtained from a plurality of surface regions of the object. In contrast, the two-dimensional views of a body obtained by the Shimoni apparatus (if these are viewed by the Office as allegedly being analogous to the shape data recited in claim 1) are disclosed as being obtained by a gamma camera, an x-ray device or a transmission CT device (see column 6, lines 33-36). Given that these devices obtain information from within a body, it is not seen how the two-dimensional views disclosed in the Shimoni patent can be deemed as being obtained from a plurality of surface regions of an object (e.g., the Shimoni patent refers to obtaining a planar slice of the body at column 5, lines 25-35). Claim 1 is further distinguishable over the Shimoni patent for at least this additional reason.

Claim 28 recites an image input system comprising, *inter alia*, a calculating unit for calculating coordinate transformation information based upon a plurality of shape data obtained from a plurality of surface regions of an object, and a processing unit for synthesizing at least some of the plurality of shape data in accordance with calculated coordinate transformation information. Applicants respectfully submit that at least these features are not disclosed in the Shimoni patent at least for reasons set forth with regard to claim 1 above. Withdrawal of the rejection against claim 28 is respectfully requested for at least these reasons.

It is noted that the Office has cited the Abstract and column 7, line 8 through column 8, line 48 of the Shimoni patent for allegedly disclosing the features recited in

claims 1, 4 and 25-28. If the Office maintains this rejection, the Office is respectfully requested to point out precisely where the Shimoni patent allegedly discloses each of the features recited in claims 1, 4 and 25-28.

The Office Action includes a rejection of claims 1, 4 and 25-28 under 35 U.S.C. § 102(e) as allegedly being anticipated by the Ono et al. patent (U.S. Patent No. 5,588,097). The Office alleges that Figures 1b, 5 and 6 of the Ono et al. patent disclose the features recited in these claims. This rejection is respectfully traversed.

Features of claims 1, 4 and 25-28 have been noted above. In particular, independent claims 1, 4, and 28 each recite, *inter alia*, a measuring unit for measuring an object and for generating shape data of the object. Independent claim 25 recites, *inter alia*, measuring means for means for measuring an object and for generating shape data of the object, and independent claim 27 recites, *inter alia*, a plurality of measuring units for measuring an object and for generating shape data of the object.

In contrast, the Ono et al. patent does not disclose a measuring unit, measuring means, (or a plurality of measuring units as recited in claims 1, 4 and 25-28. Rather, the Ono et al. patent discloses an apparatus that performs calculations for rotating an object according to specified orientations and for displaying the rotated object on a display (see, e.g., Abstract of the Ono et al. patent). The apparatus includes an image generating section 2. As noted at column 2, lines 55-59 of the Ono et al. patent, "The image generating section 2 includes a figure processing device 11 for generating, in the image generation mode, a three-dimensional figure based on the input information from the user,

and a memory device 12 for storing the data (X, Y, Z) of this figure." Accordingly, it is evident that information used to generate a three-dimensional figure is input by a user. There is no disclosure in the Ono et al. patent of a measuring device, and Figures 1b, 5 and 6 therein cited by the Office contain nothing to the contrary. Claims 1, 4 and 25-28 are distinguishable over the Ono et al. patent for at least this reason.

In addition, the Ono et al. patent does not disclose a processing unit for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information as recited in claims 1, 4, 27 and 28 or synthesizing means for synthesizing at least some of the plurality of shape data in accordance with the calculated coordinate transformation information as recited in claim 25. Rather, the Ono et al. patent utilizes information input by a user to generate a three-dimensional figure that is rotated and displayed. Accordingly, it is not seen how the Ono et al. patent allegedly discloses a processing unit (or processing means) for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information as recited in claims 1, 4 and 25-28. Claim 1, 4 and 25-28 are further distinguishable over the Ono et al. patent for at least this additional reason. Withdrawal of the rejection against claims 1, 4 and 25-28 is respectfully requested.

It is noted that the Office has cited Figures 1b, 5 and 6 of the Ono et al. patent for allegedly disclosing the features recited in claims 1, 4 and 25-28. If the Office maintains this rejection, the Office is respectfully requested to point out precisely where the Ono et al. patent allegedly discloses each of the features recited in claims 1, 4 and 25-28.

The Office Action includes a rejection of claims 1, 4 and 25-28 under 35 U.S.C. § 102(e) as allegedly being anticipated by the Heier et al. patent (U.S. Patent No. 5,285,397). The Office alleges that the Abstract and Figure 2 of the Heier et al. patent disclose the features recited in these claims. This rejection is respectfully traversed.

As noted above, claims 1, 4, 27 and 28 recite an image input system, comprising, *inter alia*, a processing unit for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information, and claim 25 recites an image input system comprising, *inter alia*, synthesizing means for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information. Applicants see no disclosure in the Heier et al. patent, including the Abstract or Figure 2 therein, of a processing unit (or synthesizing means) for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information, as recited in claims 1, 4 and 25-28. Accordingly withdrawal of the rejection against claims 1, 4 and 25-28 is respectfully requested for at least this reason. If the Office maintains this rejection, the Office is respectfully requested to point out precisely where the Heier et al. patent allegedly discloses a processing unit (or synthesizing means) for synthesizing at least some of a plurality of shape data in accordance with calculated coordinate transformation information as recited in claims 1, 4 and 25-28.


Having addressed all the rejections set forth in the Office Action, withdrawal of the rejections of record and allowance of claims 1, 4 and 25-28 are respectfully requested. Moreover, given that independent claim 28 is generic to claims 1-6 and 25-26, it is

respectfully requested that claims 2, 3 5 and 6 be rejoined and allowed with the application.

Should any questions arise in connection with this application, the Examiner is invited to contact the undersigned at the number indicated below.

Respectfully submitted,

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